Nova Scotia Department of Agriculture and Marketing

Soils and Crops

Fact Sheet

WINTER MILLING WHEAT PRODUCTION

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FIELD SELECTION

Weed Control - Perennial weeds e.g. couchgrass should be controlled prior to seedbed preparation with a grass herbicide such as Roundup.

Soil Type - Well drained soils are preferred to allow for improved winter survival and good spring trafficability. Sandy soils should be avoided due to yield limitations.

Soil Fertility - Soil test is the best indicator. Soils testing medium or better for P_2O_5 and K_2O are preferred. Soil pH should be a minimum of 6.0.

Previous Crop - A non-cereal is preferred. Winter wheat should not follow spring or winter wheat.

VARIETY SELECTION

Monopol and Absolvent are the only two winter wheats currently recommended that have the potential for producing milling quality grain. Absolvent is more winter hardy than Monopol but is more susceptible to mildew.

Winter wheat intended for milling purposes must be grown from certified seed (identified by the blue tag) to qualify for the Identity Preserve (IP) Program. This program is conducted by the Canadian Seed Growers Association (CSGA) and co-ordinated by the N.S. Winter Grain Marketing Board. Producers must retain all seed tags and apply to the N.S.W.G.M.B. for field inspection under this program.

FALL FERTIILITY

Phosphorous and Potash should be applied according to soil test prior to planting. 20-30 kg/ha of nitrogen should be applied prior to seeding or when tramlines appear.

SEEDING

Seeding in the Annapolis Valley should be done between Sept. 10th and Sept. 30th, while in the rest of the Province between Sept. 1st and Sept. 10th.

Seeding rate should be based on kernel weight and germination % to give a seeding rate of 400-450 viable seeds/m^2. (see table 1 below).

Table 1

Seeding Rate (kg/ha)

1000 k.wt. (g)	Viable Seeds/m^2 300	350	400	450
30	90	105	120	135
35	105	123	140	158
40	120	140	160	180
45	135	158	180	203

Seedbed preparation is critical. Seedbed should be firm, rolling prior to planting may be beneficial. Optimum seeding depth is 1.5 to 2.5 cm.

Tramlines - Tramlines are essential to the production of milling quality wheat. Applications of inputs (eg nitrogen) are required up to heading time requiring the use of tramlines to minimize damage to the crop and ensure uniform applications.

FALL WEED CONTROL

Weed control must be based on weed species present and density (5% or more ground area covered justifies control). Ensure herbicide used is recommended for Fall application.

SPRING FERTILITY

1. 80 kg/ha of nitrogen, as early as field travel is allowed in the form of Ammonium Nitrate or Urea.
2.* 60 kg/ha of N, at or before growth stage 32 (180 kg/ha 34-0-0).
3.* 60 kg/ha of N, 8 days prior to head emergence (ZGS49). If head population exceeds 600/m^2, 80 kg of N may be warranted.

* Urea is not recommended for application 2 and 3, due to possible high loss of N to the air (volatilization) unless rain is assured within hours of application.

LODGING CONTROL

Where yield potential is high and there is a risk of lodging a plant growth regulator should be used.

	Monopol	Absolvent	ZGS
Cycocel l/ha	2.0	1.75	30-31*
Cycocel l/ha	0.5	0.75	32

* Cycocel Extra should be applied only when the temperature in the crop is above 7°C during and for 30 minutes after application. If too cold 1st application should be omitted and increase ZGS 32 application to 1.5 l/ha. If sandy soil, weak stand and/or low yield potential, 2nd Cycocel Extra may not be needed.

Cerone 1.0 l/ha (ZGS 37-45) if 1st Cycocel Extra not used or if lodging potential warrants.

Cycocel Extra and Cerone should be applied in 200 l/ha of water.

DISEASE CONTROL

Scout fields regularly to monitor disease presence;

ZGS 30-31 Bayleton* @ 250 g/ha (1st sign of mildew).
Dithane M45* @ 1.0 -1.5 kg/ha ZGS 30-31 (early Septoria Control).

ZGS 32-39 Tilt* @ 0.5 l/ha
Dithane M45 @ 1.5-2 kg/ha

ZGS 55 (heads 1/2 emerged) Tilt @ 0.5 l/ha
Dithane M45 @ 1.5 kg/ha

Apply all fungicides with 300 l/ha of water.

* Preharvest interval from application Bayleton 60 days, Tilt 45 days, Dithane M45 40 days. All rates are in product. Multiple applications more likely required under high disease pressure situations.

INSECTS

Even low numbers of aphids should be controlled with a systemic insecticide when discovered on the foliage or on wheat heads.

HARVEST

Wheat should be harvested when grain moisture content reaches 18%. Delay in harvest risks grain quality deterioration if periods of rain occur and possible down grading to feed.